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10/084,785	02/25/2002	Atsushi Miyake	1018.1132101	1199

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EXAMINER

ALLEN, DENISE S

ART UNIT

PAPER NUMBER

2872

DATE MAILED: 07/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/084,785

Applicant(s)

MIYAKE ET AL.

Examiner

Denise S Allen

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Specification***

The disclosure is objected to because of the following informalities: the phrase “optical fiber 51” (page 1 line 14) is unclear because reference 51 is previously referred to as a light source. Suggested correction: replace the phrase “optical fiber 51” with “optical fiber 52”.

Appropriate correction is required.

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Claim Objections***

Claims 14, 15, 18 and 19 are objected to because of the following informalities: the limitation “the position of the optical element” (claim 14 line 2 and claim 18 line 2) lacks antecedent basis because it has not been previously recited in claim 13, 14, 17, or 18. Suggested correction: replace the limitation “the position” with “a position”. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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Claims 1 – 16 and 21 – 33 are rejected under 35 U.S.C. 102(e) as being anticipated by Rabinski (US 6,480,651).

Regarding claims 1 and 21, Rabinski teaches a scanning method for moving an optical element (Figure 3 reference 5) positioned on an optical axis of light within a predetermined scanning range (column 8 lines 5 – 17), the method comprising the steps of: moving the optical element at a first speed in a first direction intersecting the optical axis (moved by reference 82, column 6 lines 64 – 67 and column 7 lines 3 – 6); and moving the optical element at a second speed different from the first speed in a second direction intersecting the first direction (moved by reference 84, column 6 line 67 – column 7 line 3 and column 7 lines 6 – 9).

Regarding claims 2 – 4 and 32, Rabinski teaches the optical element is reciprocally moved within the predetermined scanning range in the first direction and the second direction (column 7 lines 59 – 63), and wherein the second speed is in a range of 300 Hz to 500 Hz, and the first speed is in a range of 0.5 to 2 Hz (column 8 lines 5 – 17).

Regarding claims 5 and 11, Rabinski teaches the step of moving the optical element in a first direction includes the step of reciprocally rotating the optical element at the first speed about a first axis orthogonal to the optical axis, and the step of moving the optical element in a second direction includes the step of reciprocally rotating the optical element at the second speed about a second axis orthogonal to the optical axis (column 7 lines 10 – 18).

Regarding claims 6, 12, and 33, Rabinski teaches the step of moving the optical element in a first direction includes the step of reciprocally sliding the optical element at the first speed along a first axis orthogonal to the optical axis, and the step of moving the optical element in a second direction includes the step of reciprocally moving the optical element at the second speed

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higher than the first speed along a second axis orthogonal to the optical axis (column 7 lines 10 – 18).

Regarding claim 7, Rabinski teaches a method of testing the intensity of light incident on an optical element (Figure 3 reference 5) positioned on an optical axis of light, the method comprising the steps of: moving the optical element at a first speed in a first direction intersecting the optical axis (moved by reference 82, column 6 lines 64 – 67 and column 7 lines 3 – 6); moving the optical element at a second speed different from the first speed in a second direction intersecting the first direction simultaneously with the movement in the first direction (moved by reference 84, column 6 line 67 – column 7 line 3 and column 7 lines 6 – 9); and measuring the intensity of the light while moving the optical element (measured by reference 70).

Regarding claim 8, Rabinski teaches the optical element includes a first optical element (reference 10) under testing, and a second optical element (references 60 and 5) for irradiating the first optical element with the light, wherein either one of the first and second optical elements is moved.

Regarding claim 9, Rabinski teaches the optical element includes a first optical element (reference 10) under testing, and a second optical element (references 20 and 70) for receiving light irradiated from the first optical element, wherein either one of the first and second optical elements is moved.

Regarding claim 10, Rabinski teaches the step of storing a position of the optical element at which a measured light intensity reaches a maximum (reference 90 and column 6 lines 34 – 37).

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Regarding claims 13, 22, and 31, Rabinski teaches a method of aligning a work (reference 10) positioned on an optical axis of light, comprising the steps of: moving an optical element (reference 5) positioned to substantially oppose the work at a first speed in a first direction intersecting the optical axis (moved by reference 82, column 6 lines 64 – 67 and column 7 lines 3 – 6); moving the optical element at a second speed different from the first speed in a second direction intersecting the optical axis and the first direction, simultaneously with the movement in the first direction (moved by reference 84, column 6 line 67 – column 7 line 3 and column 7 lines 6 – 9); measuring the intensity of the light while moving the optical element (measured by reference 70); and aligning the work based on the result of measurement (column 6 lines 34 – 37).

Regarding claims 14, 24, and 31, Rabinski teaches the step of storing the position of the optical element and the measured light intensity (reference 90 and column 6 lines 34 – 37).

Regarding claims 15 and 31, Rabinski teaches the step of aligning includes the step of fixing the optical element at a position at which the measured light intensity reaches a maximum, and moving the work along the optical axis (column 8 lines 29 – 41).

Regarding claims 16, 29, and 31, Rabinski teaches the work has a tube, a collimation lens and a capillary disposed in the tube, and an optical fiber disposed in the capillary, and the step of aligning includes the step of moving the optical fiber along the optical axis (column 10 lines 49 – 53).

Regarding claims 23 and 28, Rabinski teaches a tester for testing a work (reference 10) comprising: an optical element (reference 5) positioned on an optical axis of light; a work holder (reference 40) for holding the work to oppose the optical element; a scanning mechanism

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(reference 80) for movably holding at least one of the optical element and the work in a first direction intersecting the optical axis and for movably holding at least one of the optical element and the work in a second direction intersecting the optical axis and the first direction, simultaneously with a movement in the first direction (moved by references 82 and 84, column 6 line 64 – column 7 line 9); an optical sensor (reference 70) for measuring the intensity of light passing through the work; and a controller (reference 90) for testing the work based on the measured intensity of light, the controller controlling the scanning mechanism to move at least one of the optical element and the work at a first speed in the first direction and move at least one of the optical element and the work at a second speed different from the first speed in the second direction.

Regarding claim 25, Rabinski teaches the work is fixed (on reference 40), and the optical element is moved by the scanning mechanism (reference 80).

Regarding claims 26 and 31, Rabinski teaches the optical element is a mirror, and the sensor measures the intensity of reflected light from the mirror (column 10 lines 49 – 53).

Regarding claim 27, Rabinski teaches the optical element is a lens, and the sensor measures the intensity of light, which transmits the lens (column 10 lines 49 – 53).

Regarding claim 30, Rabinski teaches the controller includes a storage device for storing a moving distance of the optical fiber along the optical axis (reference 90 and column 6 lines 34 – 37).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 17 – 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rabinski.

Regarding claim 17, Rabinski discloses the claimed invention except for the work and the optical element being reversed. It would have been obvious to one having ordinary skill in the art at the time the invention was made to reverse the work and the optical element, since it has been held that a mere reversal of working parts of a device involves only routine skill in the art. One would have been motivated to reverse the work and the optical element for the purpose of reducing stress on the optical element.

Regarding claim 18, Rabinski teaches the step of storing the position of the work and the measured light intensity (reference 90 and column 6 lines 34 – 37).

Regarding claim 19, Rabinski teaches the step of aligning includes the step of holding the work at a position at which a measured light intensity reaches a maximum, and moving the work along the optical axis (column 8 lines 29 – 41).

Regarding claim 20, Rabinski teaches the work has a tube, a collimation lens and a capillary disposed in the tube, and an optical fiber disposed in the capillary, and the step of aligning includes the step of moving the optical fiber along the optical axis (column 10 lines 49 – 53).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Denise S Allen whose telephone number is (703) 305-7407. The examiner can normally be reached on Monday - Friday, 8:30am - 5:00pm.



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew A Dunn can be reached on (703) 305-0024. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

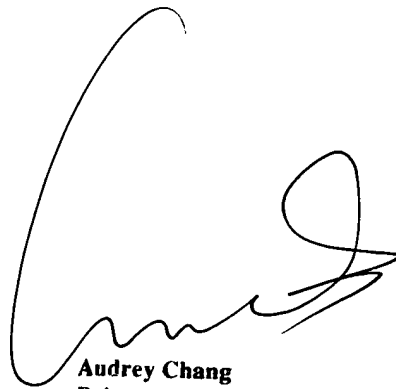
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

Denise S Allen  
Examiner  
Art Unit 2872



dsa

July 13, 2003



Audrey Chang  
Primary Examiner  
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